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COMMUNICATIVE CAPITALISM AND CLASS STRUGGLE

We have entered the first phase of the revolt of the knowledge class. The protests associated with the Occupy movement, Chilean student protests, the Montreal protests, European anti-austerity protests, some components of the protests of the Arab spring, as well as multiple ongoing and intermittent strikes of teachers, civil servants, and medical workers all over the world, are protests of those proletarianized under communicative capitalism. These are not struggles of the multitude, struggles for democracy, or struggles specific to local contexts. Nor are they merely the defensive struggles of a middle class facing cuts to social services, wage stagnation, unemployment, and declining home values. They are fronts in a class war under the conditions of global communicative capitalism.

Mainstream media babble about Facebook and Twitter revolutions was right, but for the wrong reasons. It was right to draw our attention to networked media, to suggest a link between the protests and ubiquitous communication networks. But it was wrong to think that protests are occurring because people can easily coordinate with social media, that they are primarily struggles for democracy, or that they are indications of a push for freedom on the part of networked individuals.¹ These revolts make sense as class struggle, as the political struggle of a knowledge class whose work is exploited and lives are expropriated by communicative capitalism.²

I am using the term knowledge class very broadly to designate those whose communicative activities generate value that is expropriated from them.³ I have in mind both the wide field of knowledge labor and the voluntary, unpaid, everyday activities of media use that are traced,

1 Paul Mason, *Why It's Kicking Off Everywhere: The New Global Revolutions*, London, Verso, 2012.

2 See my discussions of communicative capitalism in: Jodi Dean, *Democracy and Other Neoliberal Fantasies*, Durham, Duke, 2009; Dean, *Blog Theory*, Cambridge, Polity, 2010.

3 See Christian Fuchs, "Labor in Informational Capitalism and on the Internet", *The Information Society*, 26, 2010, pp. 179–196.

stored, aggregated and analyzed as a proprietary resource for capitalist accumulation.⁴ Paid, unpaid and precarious labor should not be treated separately. As Enda Brophy and Greig de Peuter powerfully demonstrate, they constitute a “circuit of exploitation”. Brophy and de Peuter use the smartphone to articulate this labor circuit, making sense of it in terms of work typical of a “cybertariat”. The “circuit of exploitation” around the smartphone moves from extraction, assembly and design through mobile-work, support-work, and e-waste.⁵

SUPPORTING EVIDENCE

Where might we find support for the idea that we are witnessing an early phase of the class struggle of the knowledge class? Demographic data is a good place to start. In an analysis of Occupy Wall Street (OWS), Ruth Milkman, Stephanie Luce and Penny Lewis find that highly educated young people were over-represented among OWS activists and supporters and that many were underemployed, indebted or had recently lost their jobs.⁶ A report based on data collected by Turkish security forces shows that over half of the Gezi park protesters were in university or university graduates, even though their incomes were in the bottom economic half.⁷

Andre Singer, looking at the massive Brazilian protests of June 2013, likewise emphasizes the predominance of young, highly educated and un- or underemployed adults.⁸ Singer finds that in protests in the eight Brazilian state capitals, 43 per cent of protesters had college degrees. In protests in Sao Paolo, nearly 80 per cent had college degrees. Although these educational levels could suggest a middle class revolt, data on income and occupation point in the direction of the lower and lower-middle class, the bottom economic half of society where people are more likely to work as shop assistants, drivers, waiters, receptionists and primary school teachers than they are as technicians or administrators. To make sense of the disparity between high education and low incomes, Singer posits a new proletariat or precariat taking to the streets.

Looked at most broadly, the demographics of recent protests point to heavy involvement by those who are young, well-educated, and un-

4 Catherine McKercher and Vincent Mosco, *Knowledge Workers in the Information Society*, Lanham, Lexington Books, 2007.

5 Enda Brophy and Greig de Peuter, “Labours of Mobility: Communicative Capitalism and the Smartphone Cybertariat”, in: Andrew Herman et al. (eds.), *Theories of the Mobile Internet: Materialities and Imaginaries*, London, Routledge, 2014.

6 Ruth Milkman et al., “[Changing the Subject: A Bottom-Up Account of Occupy Wall Street in New York City](#)”, New York, CUNY The Murphy Institute, 2013, p. 4.

7 “[78 Percent of Gezi Park Protest Detainees Were Alevis: Report](#)”, *Hurriyet Daily News*, November 25, 2013.

8 Andre Singer, “Rebellion in Brazil”, *New Left Review*, 85, Jan-Feb, 2014, pp. 19–37.

or underemployed. Because of the tight labor market, they encounter a decreasing return on their investment in education. As they wind up in jobs for which they are over-qualified, they end up pushing those without a college education out of the labor market entirely, thereby contributing indirectly to long-term unemployment.⁹ In 2013, the occupations employing the largest numbers of people in the US were all in the service sector: retail sales, cashiers, food service, office workers, nursing and customer service.¹⁰

Ongoing labor struggles also support the hypothesis of the revolt of the knowledge class. Alongside the large-scale movements, there has been an array of strikes and actions by communicative laborers. Highly visible ones in the US include the protests of civil service workers in Wisconsin in 2011 and the Chicago teachers' strike of 2012. Globally, strikes by knowledge workers seem to be increasing. Here is a partial list from March 2014: public sector and airport workers in Germany; cleaners at the University of London; a telecom strike in Ghana; a sit-in at an airport in Sudan in protest over the outsourcing of security jobs; teachers and education support workers in Western Australia; 7000 doctors in South Korea opposing plans to introduce telemedicine and for-profit hospital subsidiaries; Greek civil servants, teachers, doctors, and pharmacists; non-teaching staff and postal workers in India.¹¹ Even this partial list of disconnected struggles in the workplaces of the knowledge class, supports the idea that the protests of the last few years are revolts of the *cognitariat*.

At the same time, given changes in the workplace associated with increased use of technology, flexibilization, precaritization and the related decline of unions, we cannot expect class struggle in communicative capitalism to be exclusively or even primarily in clearly delineated workplaces. Communicative production itself takes place throughout the social field. That a struggle does not take the form of a classic workplace struggle, in other words, does not mean that it is not class struggle. Education, debt, housing, and student protests are themselves forms of class politics and not distinct areas of issue politics. Likewise, that a primary organizational feature of the recent protests has been the general or mass assembly, often in parks or public squares, should not direct us away from class struggle. The mainstream media often emphasises the fact that occupiers are always on their phones uploading videos and tweeting: for contingent and mobile workers, the park is a workplace. Their phones are means of production. When they

9 Jordan Weissmann, "53% of Recent College Grads are Jobless or Underemployed – How?", *The Atlantic*, April 23, 2012; Weissmann, "College Grads Taking Low-Wage Jobs Displace Less Educated", *Bloomberg*, March 23, 2014.

10 "Occupational Employment and Wages – May 2013", *Bureau of Labour Statistics*, U.S. Department of Labor, 2014.

11 See the overview provided by the [World Socialist Web](#).

occupy, they put these means of production to a use of their own choosing, not capital's (although capital can still expropriate it).

Demographics and workplace struggles support the idea of the revolt of the knowledge class. I turn now to the basic idea of communicative capitalism and its implications for an understanding of the current setting of class struggle.

COMMUNICATIVE CAPITALISM

Communicative capitalism refers to the form of late capitalism in which values heralded as central to democracy materialize in networked communications technologies. Ideals of access, inclusion, discussion and participation are realized through expansions, intensifications and interconnections of global telecommunications. In communicative capitalism, capitalist productivity derives from its expropriation and exploitation of communicative processes. This does not mean that information technologies have replaced manufacturing; in fact, they drive a wide variety of mining, chemical, and biotechnological industries. Nor does it mean that networked computing has enhanced productivity outside the production of networked computing itself. Rather, it means that capitalism has subsumed communication such that communication does not provide a critical outside. Communication serves capital, whether in affective forms of care for producers and consumers, the mobilization of sharing and expression as instruments for "human relations" in the workplace, or contributions to ubiquitous media circuits.

Other names for communicative capitalism are knowledge economy, information society, and cognitive capitalism. Although they are all trying to designate the same formation, each highlights something different. Knowledge points to combinations of skill and content (know-how and know-that); information points just to content, although its circulatory systems are implied. Cognitive is too narrow and is linked to the idea of immaterial labor, which has rightly been subjected to thorough critique. I highlight communication in part because I want to underscore the impact of this iteration of capitalism on democracy: it subsumes it, eliminating its capacity to designate a critical gap within the social field. What Jürgen Habermas theorized as communicative action does not provide a critical alternative to instrumental reason and the one-dimensional society. It does not because communication has become a primary means for capitalist expropriation and exploitation. Linguistic, affective, and unconscious being-together, flows and processes constitutive not just of being human but of broader relationality and belonging, have been co-opted for capitalist production.

Marx's analysis of value in *Capital* helps explain how communication can be a vehicle for capitalist subsumption. In his well-known discussion of the commodity, Marx considers how it is that different sorts of goods can be exchanged with one another. His answer is human labor; understood as quanta of time, labor renders different goods commensurable with one another. But how is this possible? Why would an hour of mining labor be commensurate with an hour of farming labor? The answer involves the fundamentally social character of labor. What is common to different kinds of human labor is that they are all labor in the abstract, components of the larger homogeneous mass of human labor. Labor, and hence value, is inextricable from the relations of production and reproduction constitutive of society. Products of labor are "crystals of this social substance, common to them all," that is to say, values. Communicative capitalism seizes, privatizes, and attempts to monetize the social substance without waiting for its crystallization in products of labor. It does not depend on the commodity-thing. It directly exploits the social relation at the heart of value. Social relations don't have to take the fantastic form of the commodity to generate value for capitalism. Via networked, personalized communication and information technologies, capitalism has found a more straightforward way to appropriate value.

One of the clearest expressions of communicative capitalism's direct exploitation of the social substance is Metcalfe's Law: "The value of a communications network is proportional to the square of the number of its' users."¹² The basic idea is, the more people using a network, the more valuable it is. The truth in Metcalfe's Law is its association of value with the communicative network itself. Value is a property of the relations, the links, between and within pages. Google's PageRank algorithm is one of most successful information retrieval algorithms because it takes linking into account, mining and extracting common knowledge. PageRank puts to use the fact that networked communications are the form of capitalism's subsumption of the social substance to its terms and dynamics. Matteo Pasquinelli thus argues that, "Google is a parasitic apparatus of capture of the value produced by common intelligence."¹³ He treats the prestige that PageRank attends to (and reflexively enhances) in terms of the *network value* of any given link. Network value describes a link's social relations: How many other links is it related to? Are those links related to other links? How many? Google captures this value, the link's social substance and its place within a general system of social relations.

¹² Bob Briscoe et al., "Metcalfe's Law is Wrong", *IEEE Spectrum*, July, 2006.

¹³ Matteo Pasquinelli, "Google's PageRank Algorithm: A Diagram of the Cognitive Capitalism and the Rentier of the Common Intellect", in: Konrad Becker and Felix Stalder (eds.), *Deep Search: The Politics of Search Beyond Google*, Edison, Transaction, 2009.

Communicative capitalism subsumes everything we do. It turns not just our mediated interactions, but all our interactions, into raw material for capital.¹⁴ Financial transactions, GPS location data, RFID tags, interactions that are filmed or photographed, and soon, the data generated by the small ubiquitous sensors in what is called the *internet of things*, enclose every aspect of our life into the data form. A few years ago we might have understood this as a communicative commons. Now, with the absorption of a wide array of forms of unstructured data into massive data pools, it is clear that we are dealing with something even more all-encompassing. Big data is the capitalists' name for this material that Marx understood as the social substance.

Understanding the present in terms of communicative capitalism has repercussions for how we think about communication, subjectivity and the social field. First, under communication messages are contributions. The idea of a message as something sent by a speaker to a receiver in order to elicit a response from that receiver no longer holds. Messages are now contributions to circulating content. There's a shift from the primacy of a message's use value to the primacy of its exchange value, to its capacity to circulate, to be forwarded and to be counted. We see this shift in social media every time a platform takes off: what begins with a kind of intimacy as people interact (through posts, updates, tweets) changes as more and more people join and the primary activity changes to forwarding.

Unlike a message, which needs to be understood, a contribution is just an addition. One contributes one's opinion or idea to whatever discussion is going on. This additive feature of the contribution depends on a fundamental communicative equivalence. As a contribution, each message is communicatively equal to any other. What matters is not what was said but rather *that* something was said. No opinion or judgment is worth more than any other (they each count as one comment on my blog, one like, one tweet). Each adds *something* to the flow. Facts, theories, judgments, opinions, fantasies, jokes, and lies circulate indiscriminately.

The astronomical increase in information generated by our searching, commenting and participating entrap us in a setting of communication without communicability. As contributions to circuits of information and affect, the content of our utterances is unimportant. Words are counted in word clouds, measured by how often they are repeated rather than by their meaning. People increasingly circulate images rather than ideas, unsure how ideas will be interpreted or received. This decline in a capacity to transmit meaning, to symbolize

14 See Beñat Bilbao-Osorio et al., "The Global Information Technology Report 2014: Rewards and Risks of Big Data", *World Economic Forum*, 2014.

beyond a limited discourse or immediate, local context, characterizes communication's reconfiguration into a primarily economic form. Communicative production is for circulation more than use (getting attention not furthering understanding). Words and images circulate, but they do so shorn of meaning.

Correlative to the change in communication is a change in subjectivity. Formerly powerful markers of symbolic identity – that place from which we judge ourselves – have withered away. The old political subjects of industrial worker and bourgeois citizen split between public and private spheres no longer organize action. As symbolic figures for politics, they have been critiqued, complicated, and pluralized. The material conditions that made them possible have been radically altered, not least through communicative capitalism. Think of the end of divisions between work and home, between being at work and not being at work, as well as the array of developments associating with de-industrialization, off-shoring, post-fordism, and informatization. A similar decline in symbolic efficiency affects racial, ethnic, gender and sexual identifications. They, too, are less fixed, less stable, less available as determinate subject positions – although they remain sites of potent, intense struggle.

Put in Lacanian terms, we see symbolic identities replaced by imaginary identities. Symbolic identity involves the subject's identification with an ego ideal, that is, with a perspective before whom the subject sees himself and his actions. Imaginary identification refers to the image that the subject adopts of himself. Symbolic identification, we might say, establishes the setting that determines which images appear and how it is that some are more compelling or attractive to us than others. Imaginary identification refers only to my self-image.

The networked interactions of communicative capitalism do not provide symbolic identities – sites from which we see ourselves as loci of collective action. Rather, they provide opportunities for new ways for me to imagine myself, a variety of lifestyles that I can try and try on. This variety and mutability makes my imaginary identity extremely vulnerable – the frames of reference that give it meaning and value are forever shifting; the others who can rupture it might appear at any moment and their successes and their achievements, call mine into question. This insecurity is not only psychic: it is a reasonable response to struggles to persist in global, reflexive financial and information networks. In a convincing discussion of the impact of knowledge management (KM) techniques on highly educated knowledge workers, Christopher Newfield observes,

“KM insisted that good college grads are no different from other production workers: there is nothing wrong with them,

exactly, but they do not contribute the only thing that counted in the knowledge economy – unique comparative advantage through proprietary innovations.”¹⁵

No wonder so many of us emphasize our unique individuality: our jobs depend on it.

The social field of communicative capitalism is characterized by competition, division and inequality. This is not an arena we can view in terms of a public sphere of rational deliberation and democratic decision-making. It is one where numbers matter more than content, where *how many* takes the place of *how come*, where correlation displaces causation. The clearest explanation of the constituent role of inequality in communicative capitalism comes from Albert-László Barabási’s discussion of power-law distributions in complex networks.¹⁶ Complex networks – networks characterized by free choice, growth and preferential attachment – have a specific structure. The top, or most popular node, has twice as many links as the second most popular, which has more than the third most popular and so on, such that there is very little difference among those at the bottom but massive differences between top and bottom. Although this might not seem very significant and even rare – we tend to expect most distributions we encounter in our everyday life to follow a bell curve – the sorts of power-law distributions we find in complex networks are in fact pretty common. They characterize academic citation networks: lots of articles are written, few are read, but the same four are cited by everybody. This is the same structure that produces blockbuster movies, best-selling novels and giant internet hubs. The idea appears in popular media as the *80/20 rule*, the winner-takes-all or winner-takes-most character of the new economy, and the *long tail*.

In these examples, the *one* in first place emerges through the generation of a common field. Think of a competition: best weight-loss app or best city tourism app. The contest generates a common field that will produce a winner. These commons can be generated in a variety of ways: in comments on a post (think of Reddit and the ways that readers vote posts to move up and down in the rankings), in web articles (think *Huffington Post* blog posts or other sites offering lots of click bait), and on Twitter. The more participation, the larger the field, the greater the inequality, and therefore, the greater the difference between the one and the many. Expanding the field produces the one.

15 Christopher Newfield, “[The Structure and Silence of the Cognitariat](#)”, *Eurozine*, February 5, 2010.

16 See, for example: Albert-László Barabási, *Linked: The New Science of Networks*, New York NY, Basic Books, 2002.

So in addition to the wide array of tried and true operations through which capitalists have always exploited workers – length of working day, wage theft, speed ups, charging them for the means of production – communicative capitalism opens up new avenues for exploitation. Because the common is the general field out of which the one emerges, exploitation consists of efforts to stimulate the creative production of the field in the interest of finding – and then monetizing – the one. The best example of this is the Chinese website Qidian.com, which has a million registered writers and a hundred million paying members. The writers receive fractions of a cent per thousand-word update. To make enough money to survive requires writing hundreds of thousands of words a month – breaking down the division between physical and mental labor. The vast majority is stuck in the bottom. A lucky few (29) become Platinum Writers or Big Dogs. Some of their novels have been adapted for television.¹⁷

The power-law distribution of nodes in complex networks (again, networks characterized by free choice and preferential attachment) tells us that inequality is a necessary feature of communicative capitalism. It is generated by the free flow of information through the networks and then seized and exploited in the capitalist competition for profit. If we are honest, we have to admit that there is actually no such thing as social media. Digital media is class media. Networked communication does not eliminate hierarchy, as we believed, in entrenches it as it uses our own choices against us.

CLASS STRUGGLE

Change in communication, imaginary over symbolic identity, and extreme inequality: with these as key features of communicative capitalism, what would we expect class struggle to look like?

With respect to workplace struggles, we would expect more struggles among those in communicative labor – teachers, transport and the service sector. We would expect struggles to extend beyond the workplace, perhaps involving hacking as a kind of contemporary sabotage as well as various kinds of misuse of communicative devices. But more fundamentally given the changes in communication and subjectivity, we would expect the expropriated to face real difficulties in organization, in constructing clear narratives, and symbols. We would expect images to take primacy over arguments, positions and demands. We would expect intense attachment to individuality, difference and uniqueness – attachments that would hinder solidarity. We would expect suspicion of those deemed to threaten that uniqueness. Micro-

¹⁷ Ning Hui, “What’s Behind China’s Growing Legions of Online Readers”, *TeaLeafNation*, April 23, 2013.

politics, issue-politics, anarchism, one-off demos, clictivism, and ironic events would, in this setting, seem more compelling (they would definitely be easier) than the sustained work of party-building. And we would expect an increased focus on inequality.

The concept of communicative capitalism thus makes the protests and revolts of the last few years legible as the class struggle of the proletarianized. It accounts for the insistence of personal media, the people protesting, the economic position of the protesters *and* the political ambiguity of the protests. New proles often have a strong libertarian bent. They tend to present themselves as post-political or anti-political (as in, for example, the Spanish movement of the squares). They are so fluid and spongy ('whatever beings' with imaginary identities as I explain in *Blog Theory*) that they can be channeled in different directions. They have a hard time uniting as a class even as their actions are the expressions of a class.

What about the other side? If the recent years of riot and protest have been significant, we would expect a reaction from capital and the state, an intensification of surveillance and policing, a use of state resources to protect banks and corporations, and an attempt to return as quickly as possible to business as usual. We would expect capital and the state to try to turn protests into opportunities for capital accumulation, whether as content or opportunities for network growth. More than simply a reaction to the protests, this tendency to expropriation is one that directly opposes them. Big data makes this clear. More precisely, if crowds – demonstrators and occupiers – express a new common of collective struggle then big data is an effort to enclose and expropriate this common.

BIG DATA

Two metaphors stick out in big data rhetoric: data as oil and data as gold. That is to say, fuel and money – something that powers and something that circulates. The oil and gold metaphors are telling in that they identify big data as the natural resource on which communicative capitalism relies. This resource, produced by all in common, is seized, enclosed, and privatized in a new round of primitive accumulation. In *Capital's* famous Part VIII, Marx discusses the "historic process of divorcing the producer from the means of production." This process involved the forcible enclosure of the commons. Landlords, assisted by the law, expropriated what had belonged to the people in common. Property based on the labor of the owner is thereby replaced with property based on capitalist ownership. In Marx's words, "the pigmy property of the many" is concentrated "into the huge property of the few."

David Harvey rightly points out that far from existing outside of capitalist processes as some sort of origin, the practices associated with primitive accumulation coexist with capitalism. He thus emphasizes accumulation by dispossession, associating various schemes of privatization, financialization and commodification, with a new enclosure of the commons.¹⁸ Dispossession, rather than happening all at once, is an ongoing process. No one will deny the *ongoingness* of data dispossession. Sometimes it is blatant: the announcement that our call will be monitored for quality assurance, the injunctions to approve Apple's privacy changes again or the necessity of renewing passwords and credit card information. Sometimes the ongoingness is more subtle; in maps, GPS signals, video surveillance, and the RFID tags on and in items we purchase. And sometimes the ongoingness is completely beyond our grasp, as when datasets are combined and mined so as to give states and corporations actionable data for producing products, patterns, and policies based on knowing things about our interrelations one to another that we do not know ourselves. Here the currents of lives as they are lived are frozen into infinitely separable, countable, and combinatory data-points.

There is, however, a strangeness to data dispossession that differentiates it from the dispossession that accompanies debt, privatization or foreclosure. It is not as if we no longer have our location when our location data is sold to advertisers in a real-time auction. We still have our names and email addresses when we provide them in exchange for access to a website. It is not even that we somehow lose control over our names, addresses and other identifying information – such control has always been a myth that treats markers that pinpoint us for state and capital as crucial to a similarly fantastic vision of deep, unique, and authentic individual self. We have always been deeply imbricated with others so that their thoughts and feelings, desires and drives are inseparable from our own.

The dispossession of big data, then, is not about control of our individual identities. Rather, we are dispossessed of a certain kind of temporality and a certain kind of being together. These are expropriated from us and put to alien use. Two kinds of temporality are expropriated: the *momentary* and the *futural*. We lose the *momentary* because everything leaves a storable trace. Moving through space with a mobile phone creates data. Touching a screen, looking at a screen, creates data. Rather than a time of instants, we have a time of permanents. In this time, mistakes, errors and lies, coexist with

18 David Harvey, "The 'New' Imperialism: Accumulation by Dispossession", *Socialist Register*, 40, 2004, pp. 63–87, p. 75.

corrections. Learning and falsifiability become attributes of systems, of algorithms, rather than dimensions of meaning. We lose a dimension of *futurity* in that a primary mode of data analysis is predictive: the search for patterns is in order to predict – and intervene in – the future, even if that future is only microseconds ahead, as happens in high-frequency trading. In each case, data analytics try to eliminate surprise, the very possibility that something could happen inseparable from futurity.

The expropriation of these temporalities exemplifies and intensifies the decline of symbolic efficiency. Stored moments are emptied of contexts, so many instants to be reassembled on demand. Similarly, futurity detaches from narratives of possibility, plans we might make and visions we might pursue, fragmented into so many options for prediction and arbitrage, available to government and finance but not to us.

Data dispossession changes our modes of being together by making them available for the private commercial gain of another. In the words of a 2014 World Economic Forum report on big data, “Our collective discussions, comments, likes, dislikes, and networks of social connections are now all data, and their scale is massive.”¹⁹ Sociality – and not just person to person but persons to animals, environment and things – is enclosed, analyzed for past patterns and held for future ones in the interest of squeezing out some competitive advantage. Communication, culture and care are seized and tagged. We can do nothing that is not already for capital. To invoke Karl Polanyi, data dispossession separates “the people from power” over our own communicative life. And the way that this matters is not individual but collective – our common power – exercised in multiple, fluid, indirect, and uncertain ways, over the relations we create in common.²⁰

Understood as the basic resource of communicative capitalism, big data has the characteristic of being self-renewing. It is inexhaustible and co-extensive with the reproduction of social life. It reaches through and beyond work, even beyond the reproduction of workers, into the social substance itself.

A recent White House report on big data and privacy asserts that big data can “help create entirely new forms of value.”²¹ It is worth considering this claim closely. Nothing in the report would lead one to conclude that its authors have in mind something like the collective benefit that accrues from common modes of being or the strength that

¹⁹ Bilbao-Osorio et al., p. 3.

²⁰ Karl Polanyi, *The Great Transformation: The Political and Economic Origins of Our Time*, Boston MA, Beacon Press, 2001, p. 234.

²¹ John Podesta et al., *Big Data: Seizing Opportunities and Preserving Values*, Washington DC, The White House, 2014, p. 37.

results from pulling together to address the global challenges of climate change and economic inequality. Rather, the authors seem to have capitalist value or value that leads to capital accumulation in mind. That it is taking a “new form” could mean that it is value that exceeds the wage relation and even the property relation, which is what I’ve been arguing in terms of communicative capitalism’s direct expropriation of the social substance in the form of big data. But this probably is not what they have in mind either. They are probably just thinking of new opportunities for capital accumulation.

The World Economic Forum Global Information Technology Report 2014 invokes value in this sense of corporate profits when it describes the potential for gains of 14.4 trillion dollars in added value in the commercial sector over the next ten years:

“This opportunity exists in the form of new value created by technology innovation, market share gains, and increasing competitive advantage. It translates into an opportunity to increase global corporate profits by approximately 21 per cent, driven by improvements in asset utilization (reducing costs and improving capital efficiency), employee productivity (improved labor efficiency), supply chain logistics (eliminating waste and improving process efficiency), customer experience (adding more customers), and innovation (reducing time to market).”²²

Value here is a matter of capital accumulation by the capitalist class. It accumulates from cutting the labor force (*reducing costs* and *supply chain logistics* in their terms), squeezing the remaining workers (*improved labor efficiency*), trying to get people to spend more money, and becoming more competitive. This last benefit is necessarily short-term. Even if big data gives a competitive advantage to early adopters, as it becomes standard, that competitive edge will diminish; this is the case in the adoption of any technology.

Consider a couple of the big data experiments that have generated corporate value. Bank of America put tracking sensors on ninety workers and discovered that the most productive workers engaged frequently with their colleagues. The bank started mandating group breaks and saw a ten per cent productivity increase.²³ UPS installed sensors as well as GPS in its trucks in an effort to increase efficiency and control costs. Data on more than 200 elements is collected, including truck speed, number of times the truck is put in reverse,

²² Bilbao-Orsorio et al., p. 38.

²³ Rachel Emma Silverman, “[Tracking Sensors Invade the Workplace](#)”, *Wall Street Journal Online*, March 7, 2013.

driver seat belt use, the length of time a truck is idling.²⁴ It can now decrease fuel consumption while increasing the number of deliveries per truck.²⁵

A *Forbes* article on workforce analytics indicates the importance of big data for “controlling labor costs”, which for the healthcare, education, and service industries is upward of fifty per cent of operating budget. Many such enterprises “track the time employees arrive, what they do at work, when they leave for breaks, the times they call in sick, schedule details, personal information and much more”, writes the author, Bill Barlow. Workforce analytics lets a company use this information “to optimize its labor force by scheduling the right mix of full-time, part-time and temporary labor on a variety of schedules”.²⁶ Another way to make the same point: big data increases worker precarity as it enables companies to do more with less.

Approached in terms of class struggle, big data looks like further escalation of capital’s war against labor. If earlier waves of automation displaced industrial workers, big data portends the displacement of post-industrial or knowledge workers. It should come as no surprise, then, that education and health care, two of the last remaining sites of intensive, face-to-face, relatively high-paying labor, are often singled out in media, industry and governmental discussions of big data. An excellent study, *The Future of Employment*, by Carl Benedikt Frey and Michael A. Osborne, explains why this is the case.²⁷ Historically, those tasks could be computerized which followed clear, rule-based routines. Too many variables meant it was too hard to program. Big data breaks through this technological barrier as it enables non-routine tasks to be rendered as well-defined problems. Frey and Osborne write:

“Data is required to specify the many contingencies a technology must manage in order to form an adequate substitute for human labor. With data, objective and quantifiable measures of success of an algorithm can be produced, which aid the continual improvement of its performance relative to humans [...] As a result computerization is no longer confined to routine tasks that can be written as rule-based software queries, but is spreading to every non-routine task where big data becomes available.”²⁸

24 Shelley Mika, “Telematics Sensor-Equipped Trucks Help UPS Control Costs”, *Automotive Fleet*, July, 2010.

25 “Big Data = Big Wins for the Environment”, *UPS Pressroom*.

26 Bill Bartow, “Work Smarter: How Big Data Can Boost Labor Performance”, *Forbes*, July 5, 2012.

27 Carl Benedikt Frey and Michael A. Osborne, “The Future of Employment: How Susceptible Are Jobs to Computerisation?”, September 17, 2013.

28 Frey and Osborne, p. 15.

Examples include robotics, Google's driverless cars and the development of voice recognition capacities that let call centers replace people with algorithms. They also include the kind of knowledge work previously seen as invulnerable. Frey and Osborne find that "47 per cent of total US employment" is at high risk of being automated within the next two decades.²⁹ Massive amounts of data allow an array of decision-making tasks to be automated: medical diagnoses and treatment, fraud detection, legal services, ad design, purchase, placement and stock-trading. Education is a key battleground, with MOOCs and the ostensible personalization of student learning by conducting ever more of it on screens.

The value in and of big data is for capital, not for the people from whom it is expropriated. A contribution to the World Economic Forum 2014 report is explicit on this point. The authors, Peter Haynes and M-H Carolyn Nguyen, note that "the greater the role that data play in the global economy, the less the majority of individuals will be worth". In fact, "this could mean that a data-driven economy may become a contracting economy".³⁰ Although Haynes and Nguyen propose various schema for remunerating people for their data, when they say that "the concept of fair value exchange no longer exists," they imply that the train has already left the station. Many of us already give away massive amounts of data, and "corporations are making significant profits as a result because their cost of materials is essentially zero".³¹ They quote Jaron Lanier:

"The dominant principle of the new economy, the information economy, has lately been to conceal the value of information. [...] We've decided not to pay most people for performing the new roles that are valuable in relation to the latest technologies. Ordinary people 'share,' while elite network presences generate unprecedented fortunes."³²

CONCLUSION

The revolts of the past few years exemplify class struggle under communicative capitalism. Accepting this position entails rejecting the idea that they are primarily post-political, democratic, or strictly local movements. It entails a recognition of changes in class struggles' mode of appearance; it looks different under conditions of distributed, precarious, and unpaid communicative labor, from how it appeared

²⁹ Frey and Osborne, p. 38.

³⁰ Peter Haynes and M-H. Carolyn Nguyen, "Rebalancing Socio-Economic Symmetry in a Data-Drive Economy", in Bilbao-Orsorio et al., pp. 67–72, p. 70.

³¹ Haynes and Nguyen, p. 69.

³² Jaron Lanier, *Who Owns the Future? You Are Not a Gadget*, New York NY, Simon & Schuster, p. 15.

during the industrial labor movement. Finally, it entails thinking about the form of current struggles in light of their setting in communicative capitalism: fragmentation, the use of images over demands, and being out of doors, are not remarkable tactical innovations and advances. They are practical responses to a setting in which our communicative engagements are expropriated from us.